

**From:** [Leithead, Cheyenne](#)  
**To:** [Mason, Steve](#)  
**Subject:** Updated Chronology  
**Date:** Tuesday, September 19, 2017 11:06:21 AM  
**Attachments:** [Hurricane Harvey Chronology.xlsx](#)

---

Steve,

Please view the attached Chronology sheet and let me know if you have any questions.

Thank you,

***Cheyenne Leithead***

Weston Solutions, Inc.  
2705 Bee Cave Rd, Ste 100  
Austin, Texas 78746

(512) 651-7120 (Direct)  
(361) 290-8505 (Cell)

**CONFIDENTIALITY:** This email and attachments may contain information which is confidential and proprietary. Disclosure or use of any such confidential or proprietary information without the written permission of Weston Solutions, Inc. is strictly prohibited. If you received this email in error, please notify the sender by return e-mail and delete this email from your system. Thank you.

Region 6: Hurricane Harvey Chronology	
Date: August 17, 2017	Event: Hurricane Harvey
	For complete list of MAs / IAGs / Action Request Forms, see additional file
Thur, Aug 17	Tropical Storm Harvey is named
Sat, Aug 19	Harvey is downgraded to a tropical depression; winds at 35 mph
	Harvey is downgraded to a tropical wave
Wed, Aug 23	Harvey regenerated into tropical depression (535 miles southeast of Port O'Connor, TX); 35 mph winds
Thur, Aug 24	Harvey becomes a hurricane with max. sustained winds of 85 mph (325 miles southeast of Port O' Connor)
	By midnight, Harvey is a category 2 hurricane (220 miles from Port O'Connor); winds at 100 mph
Fri, Aug 25	
MA: 01-00	Activate EPA to Texas EOC and the RRCC to support FEMA response operations (\$15,000)
	Harvey is upgraded to a category 3 hurricane; winds of 120 mph; 75 miles southeast of Corpus Christi
	Harvey is a Category 4 storm; 130 mph winds and is 45 miles from land
	Harvey makes landfall as a Category 4 hurricane; eye of storm comes ashore between Port Aransas and Port O'Connor
Sat, Aug 26	
MA: 01-00	Deploy EPA to various locations, including but not limited to Texas EOC and the Denton RRCC to support response operations (\$20,000)
	Harvey is centered ~15 miles inland; Downgraded to a Category 3; winds of 115 mph
	Harvey is downgraded to a Category 2 hurricane
	Harvey is downgraded to a Catgeory 1 storm; 90 mph winds; Forecasters warn of potentially catastrophic flooding in the coming days
Sun, Aug 27	Harvey stationed himself over the Houston-area; extreme flooding and over 50 in. of rain in some areas
	Families are rescued from their homes due to rapidly rising waters
Mon, Aug 28	
MA: 02-00	Activate EPA to NRCC to support FEMA response operations (\$10,000)
MA: 03-00	Requested ESF-10 assistance to the State of Texas in support of assessment and response operations to actual or threatened hazardous materials and oil releases/discharge (\$8,592,000]
Tue, Aug 29	More neighborhoods are flooded after the Addicks Reservoir is open due to threats of it breaking from large amounts of water
	Fort Bend and Brazoria county under mandatory evacuation as the Brazos river due to severe threats and flooding
	Alcoa/Lavaca Bay; Jones Road GW Plume; North Cavalcade Street; Sikes Disposal Pit; Sol Lynn; South Cavalcade Street; D.L. Mud; Gulf Coast Vacuum Services; Mallard Bay landing Bulk Plant; PAB Oil & Chemical Service NPL Sites completed
Wed, Aug 30	
MA: 03-01	Amendment #1: Amend to change projected end date to 9/30/2017 and OFA Action Officer to Steve Mason. No change in funding (\$8,592,000)
	Water begins to recede in Houston, TX and clean up efforts began
	Brine Service; Crystal Chemical Co.; Falcon Refinery; Star Lake Canal;
Fri, Sept 1	
MA: 02-01	Amendment #1: Extend end to 9/11/2017. Increase funding by \$40,000 (cumulative \$50,000)
	Four No Action Assurance (NAA) letters were signed by EPA to help address fuel shortages
	Phase 1 - 41 site inspections completed
	Brio Refining; Conroe Creosoting Company; Dixie Oil Processors; Harris (Farley St.); Hart Creosoting; Jasper Creosoting; Many Diversified Interests; Palmer Barge Line; State Marine of Port Arthur; Tex-Tin Corp; United Creosoting; American Creosote Deridd
Sat, Sept 2	FEMA approved the State of Texas' request to amend the cost waiver for response effort funding
Personnel: 104	FEMA's JFO opened (R6 has two liaison stationed at JFO in Austin, TX)
Expended Funds: \$1,759,127.00	Arkema: 3 of the 9 trailers self-ignited
	TCEQ sent 4 teams to survey Beaumont area (GW plant remains off-line due to flooding conditions; SWP producing 20 MGD
	State of Louisiana received an Emergency Declaration (FEMA-3382-EM)
	Corpus Christi Discharge Assessment Team 1 observed an ongoing release of natural gas at the S. Mustang Separation Facility
Sun, Sept 3	EPA's aerial reconnaissanc aircraft continues to fly over the Arkema facility ~every 10 to 15 min
Personnel: 145	Responsible party in cosultation with UC decided to manually ignite the remaining peroxide trailers
Expended Funds: \$2,537,744.00	1.5 evacuation radius remains in effect
	PIO mobilized to the Houston Mayor's Office to began operating out of the Houston Emergency Center
	Geneva Industries/Fuhrmann Energy; Sheridan Disposal; Ruston Foundry NPL Sites Completed
Mon, Sept 4	
MA: 03-02	Amendment #2: Amend to change Federal cost share to 100% per FRM #4 of the Presidential Declaration (\$8,592,000)
Personnel: 163	Staging area secured at Beaumont Branch
Expended Funds: \$2,692,902.00	Field response activities continue at CTX and HTX branches; focus changes from assessment to recovery
	Remaining peroxide trailers at the Arkena facility were manually ignited in a controlled method
	Multiple Superfund Phase 2 Site inspections are planned; One Superfund Phase 2 inspection completed
	Acting Regional Administrator and advisors to the Administrator met with Houston Mayor/local and state officials

	Acting Regional Administratior and advisors will be touring NPL sites with reporters from national media outlets; attending Congressional briefing later today	
	EPA issued joint statement with TCEQ about controlled burn at Arkema facility; Crosby Volunteer FD/Harris County Fire Marshall's Officer performed burn	
	EPA's TAGA bus along with EPA personnel arrived in Houston	
	EPA Team began mobile air monitoring in the Manchester Community (Houston Branch); 6 locations monitored	
	Pre-sampling of staging areas completed in CTX branch	
	Total of 73 orphan containers have been collected to date	
	President approved the additiona of 7 more counties (Austin, Bastrop, DeWitt, Gonzales, Karnes, Lavaca, and Lee) to Disaster Declaratio; total # of counties on the Presidential Disaster Declaration: 39	
	French LTD; Highlands Acid Pit; Malone Services Company; Patrick Bayou; Petro-Chemicals Systems;	
Tues, Sept 5		
MA: 01-01	Amendment #1: Amend 4332DR-TX-EPA-01 for additional funds for additional personnel at State EOC/JFO at request of FEMA IMT and extension of coverage from original MA (\$275,000)	
Personnel: 157	EPA Liaison embedded with Houston Mayer's Office; toured 3 Superfund sites and briefed Senator John Cornyn's office	
Expended Funds: \$3,496,641.00	EPA Ronnie Crossland, Senior Liaison will join TCEQ Chairman Shaw for briefing with Gov. Abbott; RA Coleman will join by telephone	
	Acting Regional Admin., Chairman of TCEQ and Special Advisors will brief Mayor today.	
	EPA demob. From Arkema site	
	Acting Regional Admin. To visit the HTX command post today	
	EPA TAGA to conduct air mon. in southeast Houston around the Valero Refinery	
	EPA to host call with Environ. Justive contacts in TX and LA.	
	TCEQ operations were turned back over to the TCEQ regional office	
	Total of 86 containers collected to date	
	EPA providing support to TCEQ for DW/WW system assessments	
	Houston Magellan facility cleanup completed (product outside of contaminant)	
	10,000 gallons of petroleum were removed at Signet Enterprise vessel located at Aransas Pass (addressed by Responsible Party with EPA oversight); 45,000 gallons of petroleum removed overall	
Wed, Sept 6	TX Gov. Abbott plans to travel to CTX, HTX, Victoria, Fort Bend County and Beaumont Tues-Sat; EPA Sam Coleman has been invited and will accompany the Gov. on Thurs and Fri.; Kell Kelly will accompany Gov. on Sat.	
Personnel: 189	EPA completed tours areas impacted by storm; Kell Kelly will join JFO in Austin on Thursday as EPA's Senior Fed. Official	
Expended Funds: \$3,782,429.86	EPA has begun deploying community liaisons to serve in EOCs	
	EPA coordinating with USCG on a 2500-gallon fuel oil spill at Houston Magellan facility (product outside of the cont. area is being collected)	
	EPA assisted TCEQ by conducting site inspections at 2 State Superfund Sites	
	EPA Remedial Manager onsite and overseeing at San Jacinto Waste Pits Superfund Site	
	EPA issued statement on the assessment of Valero Houston Refinery (confirmed that a tank at facility did have a leak which occurred on 08/26/2017 from Harvey storm and flooding)	
	Total of 91 containers collected to date	
	EPA has granted all open fuel waivers requested to date	
	43 Federal Superfund Sites in the affected area have been assessed; 41 sites have been cleared	
	San Jacinto Pits and US Oil Recovery are the 2 remaining NPL sites that require additional follow up	
Thurs, Sept 7	Gov. Abbot will held a press conference at 10 am this morning. EPA Acting RA Colemand will participate	
Personnel: 197	EPA completed 50 DW and WW systems on-site assessments	
Expended Funds: \$5,210,967.68	EPA recovered 5 hurricane-damaged containers in the CTX area; 96 containers collected to date	
	In partnership with TCEQ and USCG, EPA has completed post-hurricane environmental damage assessments in 4 counties (Liberty, Austin, Waller, and Chambers)	
	19 community liaisons have been deployed to HTX	
	EPA to begin post-hurricane conf. sampling at 34 NPL Superfund sites iN TX today	
	Houston Mayor annouced city dept. are resuming normal business hours and operations	
	EPA Dive Team has been deployed to oversee PRP act. At the San Jacinto Superfund Site	
	Aerial insecticide spraying began over Refugio and Bee counties	
Fri, Sept 8	Gov. Abbot annouced John Sharp as Commissioner for the Commission to Rebuild Texas; asked all State and Federal Agencies to work together to expedite cleanup and cut rec	
Personnel: 198	TCEQ and EPA have completed 4,852 DW facilities and 2,908 WW facilities in the impacted areas.	
Expended Funds: \$5,210,967.68	TCEQ will expand to 24-hour operations; R6 staff added to SOC	
	EPA to use insectisides containing "Naled" to spray for mosquitos	
	EPA will publicly release flood water and ASPECT air data from the Arkema fires. EPA will release TAGA air mon. data from Manchester neighborhood	
	EPA ordered Arkema to provide a detailed timeline of events of how they plan to handle organic peroxides	
	EPA received notifications from 8 companies covering 12 LA/TX Gulf facilities that impending storms may cause a delay or impediment to perf. Complying w/provisions of their Consent Decrees	
	PHSMA has issued an emergency waiver order to assist EPA's efforts to remove, transport and dispose of haz. Mat. As part of Harvey	
	Senate Environment and Public Works Comm. Submitted a request for information on Arkema	
	R6 activated the Texas Poison Control Center Network	
	Total of 106 containers collected to date	
	Texas Dept. of Agri. Signed pesticide applicator certification waivers for DOD	
	EPA (R6) deployed 4 air quality tech. specialists to HTX	
Sat, Sept 9		

<b>MA: 03-03</b>	Amendment #3: Amend to obligate an additional \$1,500,000 to the original Mission Assignment to continue ESF-10 in the impacted areas, including the expanded areas since the initial Mission Assignment (\$10,092,000)
<b>Personnel: 198</b>	Office of Emergency Management Director Reggie Cheatham and Jodi Beringer, OMB Budget Manager will visit REOC and ASPECT aircraft.
<b>Expended Funds: \$5,796,955.61</b>	NASA SMD/Earth Science is preparing to send the DC-8 to spend several hours in southern TX sampling atmospheric trace gases and aerosols
	Gov. Abbot traveling to Beaumont today and accompanied by Kell Kelly
	EPA, by letter concurred State of TX use of its emergency hurricane debris management guidance
	Gov. Abbot sent letter to Admin. Pruitt encouraging support for the TX Water Development Board's request flexibility in allownaces and prodecural changes in the State Revolving Loan Fund program
	DFW-based Fruit of the Earth product currently under a stop sale order by the EPA
	EPA received 17 notifications of the force majeure claims from companies covering TX/LA
	TCEQ has invited EPA and Harris County Pollution Control Agency to part. In a Hurricane Harvey Update for environmental advocacy organizations
	EPA's TAGA mobile laboratory is currently non-operational due to a tech. malfunction
	Corpus Christi: Oversight of fuel transfer of Signet Enterprise (total of 79,000 gallons being transferred to date)
	Total of 113 containers collected to date
	EPA extended the current multi-state fuel waiver to 09/26/2017
<b>Sun, Sept 10</b>	Reggie Cheatham and OMB Budget Manager Jodi Beinger will visit the REOC and ASPECT aircraft during scheduled maintenance in Addison today
<b>Personnel: 234</b>	Montoring teams identified elevated readings of VOCs in the area between Pasadena Refining Systems, Inc. and Kinder Morgan's Pasadena Terminal near Houston Ship Channe
<b>Expended Funds: \$5,796,955.61</b>	EPA confirmed 21 out of 39 disaster declaration counties currently providing private well testing for area residents; EPA assessing if remaining 18 counties need additional support
	EPA shared approved fact sheets from TCEQ/EPA for returning residents to over 5,000 local, state, tribal and industry partnets
	HTX/Beaumont/Port Arthur to begin collection of staging of recovered orphan containers this week
	EPA received an amendment to Mission Assignment 4332DR-TX-EPA-03 for an increase of an additional \$1.5 million
	Joint news release from EPA/TCEQ was issued updating the public on the Hurricane Harvey overall response
	DTX REOC staffed with Debris Management Tech. Expert (member of FEMA Debris Task Force)
	4 EPA Air Quality tech. specialist deployed to HTX conducted total VOCs area monitoring in the Ship Channel area.
	Total of 136 containers collected to date
<b>Mon, Sept 11</b>	EPA assigned RSF Coordinator to participate in the Regional Interagency Recovery Meeting at JFO
<b>Personnel: 245</b>	Reggie Cheatham, Carl Edlund, Dan Opalski and Jodi Beringer will tour EPA's command post, Houston Laboratory, the TAGA mobile lab. And the San Jacinto Waste Pits
<b>Expended Funds: \$6,067,185.41</b>	EPA Environ. Justive Director Arturo Blacno traveling to Houston/Galveston
	Community Liaisons (CLs) assisting citizens of impacted counties
	HTX/Port Arthur/Beaumont to begin collection of orphan containers
	Total of 136 containers collected to date
<b>Tues, Sept 12</b>	
<b>MA: 01-02</b>	Amendment #2: Amend to change Project end Date to 09/30/2017 and change Project Manager to Jason Burroughs (\$275,000)
<b>Personnel: 244</b>	EPA Environ. Justice Director Arturo Blacno traveling to Port Arthur
<b>Expended Funds: \$6,241,621.21</b>	EPA/TCEQ meeting with environmental advocates in Austin
	EPA completed review of the TWD Board's request to address damage by the hurricane
	EPA confirmed that private well testing is available to residents
	FEMA requested that EPA provide a debris management expert at the JFO
	EPA will begin sampling of the 9 Superfund sites in LA
	ASPECT has completed flight operations for this response; demob in 2 days; available for Hurricane Irma operations
	Hurricane Harvey Story map is final
	Total of 218 containers collected at sites
<b>Wed, Sept 13</b>	EPA toc omplete sampling of the 34 Superfund sites in TX
<b>Personnel: 251</b>	All 3 branches are recvoering and staging orphan containers
<b>Expended Funds: \$5,060,899.57</b>	Arturo Blanco traveling to the Alabama-Coushatta tribe today
	EPA/TCEQ issued a joint news release updating the status of the water systems
	Vector Control: DOD aerial assets sprayed 199,190 acres in Orange, Jefferson, and portions of Chambers Counties
	Total of 297 containers collected at sites
	EPA receives report from PCI Nitrogen in Pasadena, TX
	ASPECT completed flight operations; total of 134 RMP, 456 drinking water; 105 WW facilities were surveyed
<b>Thur, Sept 14</b>	Govenor Abbot is expected to visit FEMA JFO in ATX
<b>Personnel: 263</b>	EPA concluded probable source of benzene and VOC readings in Machester was the roof failure and spill from a light crude storage tank at Valero Houston Refinery
<b>Expended Funds: \$5,395,063.09</b>	Total of 448 containers collected at sites
<b>Fri, Sept 15</b>	EPA/TCEQ field observation teams will observe debris staging and landfill operations to enusre best practices/program requirements are met
<b>Personnel: 262</b>	DW/WW teams completed their emergency assessments of community water systems and will demob. Today; 625 DW and 441 WW assessments were performed
<b>Expended Funds: \$5,702,062.84</b>	EPA's dive team will collect samples at San jacinto waste Pits Superfund site
	EPA issued a news release announcing that Pruitt approved a request from the State of TX to continue to waive requirements for fuels in TX through 10/1/2017

	The issuance of a Recovery Mission Assignment to EPA has been placed on hold; R6 Recovery Coordinator demob from the JFO yesterday
	EPA issued NAA Extensions to TCEQ on Loading of Tank Fuel Trucks at Petroleum Distribution Terminals, Landing Roofs on Gasoline Storage Vessels, and the Use of Vapor Recovery Systems
	Total 517 containers collected at sites
	Multi-state waiver expired
Sat, Sept 16	EPA receives a report on 9/15/17 at 9:30 pm of a fire at Enterprise Products facility in Mont Belvieu, TX. TAGA monitored facility and was informed the fire was Butane associated with a degasses unit
Personnel: 258	DW/WW assessment teams completed their emergency assessments of community water systems and demob. On 9/15/17; 625 DW and 441 WW assessments were performed
Expended Funds: \$6,594,378.76	TAGA conducted air monitoring assessments in areas near 6 industrial facilities (Baytown, Mont Belvieu, Channelview, and Pasadena) TAGA is not monitoring today (9/16/17)
	TCEQ requestin FEMA to increase EPA's ESF-10 Mission Assignment by \$8.3 million in stages
	EPA provided a No Action Assurance (NAA) for the import of 225 power generators by the Yamaha Motor Corporation
	EPA will no pursue enforcement actions against tanker trucks for certain provisions for the CAA and parallel TX regulations that relate to tank tightness and registration for tanker trucks
	Total 591 containers collected at sites
Sun, Sept 17	DOD has completed 50% of its mission-assigned spray operations
Personnel: 240	Total 657 containers collected at sites
Expended Funds: \$6,845,204.89	
Mon, Sept 18	
MA: 03-04	Amendment #4: Amend to obligate an additional \$2,100,000 change project end date to 09/21/2017 and change Project Manager to Jason Burroughs (\$12,192,000]
Personnel:	
Expended Funds:	